



About Us



**“ Our vision is to create
a leading business in the evolving
Western Australian energy market.**

Our mission is to achieve our vision
by embracing our new environment,
maximising our value by matching our
generating portfolio to market
opportunities, and driving improvements
in service and cost through opportunities
to renew and innovate whilst providing a
safe and rewarding workplace. ”

A message from Verve Energy's CEO

The biggest challenge facing Verve Energy is to earn, through competitive performance, a top position in the evolving WA electricity market which is going through fundamental change.

Verve Energy will compete in this market with other generators to supply electricity to almost 900,000 households and businesses in south west WA.

This booklet is part of that process to communicate our role, activities and facilities.

With over \$1.5 billion of assets, annual revenue of close to \$900 million, an annual fuel bill of almost \$400 million and over 500 employees, Verve Energy is a big company which makes a significant contribution to the WA economy.

Verve Energy needs to secure its reputation for technical and engineering excellence; and for reliable, safe and cost-effective operations. We will build our reputation and look for opportunities in this new competitive WA electricity market.

The industry is changing and we will change, both as a company and as individuals. These changes will be directed at being competitive without compromising our reliability, efficiency and safety.



JOHN LILLYWHITE
CEO





Verve Energy is under challenge as WA's leading electricity producer.

Verve Energy has outstanding technical and engineering expertise and a proven track record in successfully building and operating power stations. Verve Energy is also a leader in the development of sustainable energy generation using wind, bio-energy and solar technologies. We will apply this experience to the competitive benefit of our business

Verve Energy owns and operates power stations in the South West Interconnected System (SWIS), which extends from Kalbarri in the north, east to Kalgoorlie, and south to Albany. (See map back page).

Our power stations in the SWIS have a capacity to produce 3480MW of electricity.

We own and operate four major power stations – Kwinana, Cockburn, Pinjar and Muja, while a fifth at Collie is owned by us and operated by a private company.

Verve Energy's smaller power stations are situated at Mungarra, West Kalgoorlie, and Geraldton, and our joint venture power stations are at Tiwest at Kwinana and Worsley near Collie.

Our portfolio includes wind farms at Albany and Esperance, wind-diesel plants in isolated towns such as Bremer Bay, a pilot biomass plant at Narrogin and solar facilities at Kalbarri and Rockingham.





We compete against privately owned energy companies to provide a reliable electricity supply to WA's business and residential customers.

Verve Energy was created in April 2006 when Western Power separated into four businesses, with the Generation business becoming known as Verve Energy.

The separation was part of the State Government's reform of the electricity industry – how electricity is generated, distributed and retailed - to deliver lower long-term electricity prices to customers through the introduction of competition.

Owned by the State Government, Verve Energy has its own Board which reports to the Minister for Energy.

As part of moves to deregulate the power industry, the Government imposed a ceiling on Verve Energy's capacity in order to encourage competition. Verve Energy's installed generating

capacity has been capped at 3000MW (equivalent to about 75% of the state's expected needs in 2007/08).

By retiring old plant over the next three years, we will achieve that limit. Strategy is in place to replace older plant progressively so that we maintain our competitive position.

Verve Energy deals directly with retailers, not with electricity consumers.

Verve Energy has about 500 staff in six branches – Production (power stations), Trading and Sustainable Energy, Fuel, Finance and Business Services, Asset Management and Human Resources.

What makes Verve Energy distinct from our competitors is the variety of fuels - coal, gas and liquid (oil or distillate) - used in our power stations and our diverse portfolio of sustainable energy sources such as wind, bio-energy and solar.



Our power stations run on gas, coal or distillate. Gas for all of our gas-fired power stations comes from the North-West Shelf via the Dampier-Bunbury Natural Gas Pipeline and coal from the Collie coal field. Pinjar, Mungarra, West Kalgoorlie and Geraldton power stations are controlled remotely from a control centre in East Perth.

Muja Power Station

Muja Power Station, which opened in 1966, is Verve Energy's biggest power station. It is situated 225 kilometres south east of Perth and 22 kilometres east of Collie. The coal-fired power station is capable of producing 1040 megawatt (MW) of electricity or enough energy to light 10.4 million globes of 100 watts each.

Kwinana Power Station

Kwinana is unique in WA in that it can burn three fuels, coal, gas and oil. Kwinana Power Station consists of six generating units and a 20MW capacity gas turbine with a total generating capacity of 900MW. It is our second biggest power station.

It was designed and constructed as an oil-fired power station, however due to increases in the world price of oil, it was converted to coal. Gas firing was later introduced and oil firing was reintroduced in 2005.



Collie Power Station

Collie Power Station is a coal-fired power station situated 10km north of Collie. It is the most modern of our coal-fired power stations.

It is a base load power station which is capable of producing more than 300MW of electricity. It has the biggest single generation unit of all our power stations.

The power station, which opened in 1999, is owned by Verve Energy, and operated and maintained jointly by Transfield Services and Burns Roe Worley with a staff of about 40.

Cockburn Power Station

Cockburn Power Station, built in 2003, uses combined-cycle technology which features capturing exhaust heat from a gas turbine and using the heat to drive a steam turbine.

This technology allows for the production of 240MW of electricity, rather than 160MW from a gas turbine operating on its own. The efficiency of this process is better than 50% compared with less than 40% from the gas turbine operating on its own. There are environmental benefits from this process too, with a significant reduction in emissions.

Pinjar Gas Turbine Power Station

Pinjar Gas Turbine Power Station is located 15km north of Wanneroo, on the northern outskirts of the Perth metropolitan area.

It has a total generating capacity of 576MW from nine gas turbines which are primarily gas fired, but can also burn liquid fuels (distillate).

The first units were installed in 1989 and others added in later years.



Kemerton Gas-Fired Peaking Station

Kemerton Gas-Fired Peaking Station, near Bunbury, is a peaking power station built specifically to cater for peak electricity demand. It was officially opened in November 2005.

The purpose-built dual-fuel power station offers 260MW at times of peak demand, especially at the height of summer, and a rapid start-up capability. Its two 130MW turbines can burn gas or distillate or a combination of both, providing important fuel flexibility.

Kemerton Peaking Plant was built, and is owned, by Transfield Services. Verve Energy has a 25-year power purchase agreement with Transfield Services to provide electricity when required.

Mungarra Gas Turbine Power Station

The three gas turbines at our Mungarra Gas Turbine Power Station have the capacity to produce 112MW of electricity.

Built in 1990 and located 50km south east of Geraldton, Mungarra Gas Turbine Station is fired by gas.

West Kalgoorlie Power Station

Our power station in West Kalgoorlie has two gas turbines and runs on distillate. The power station has a capacity of 60MW and is run during times of peak demand and emergencies.

Geraldton Power Station

Geraldton Power Station has one gas turbine and runs on distillate. It has a capacity of 21MW and is used during peak summer demand.



JOINT VENTURES

Kwinana Tiwest

This gas-fired co-generation plant provides electricity for the SWIS and steam for the Tiwest plant. It produces 31MW of electricity.

Worsley

Worsley, near Collie, is a gas-fired co-generation plant which produces 120MW of electricity

Verve Energy is a partner with Origin Energy forming the South West Co-generation joint venture which owns the plant at Worsley and provides steam to the existing Worsley alumina refinery and electricity into the SWIS.

FUEL

Fuel accounts for around half the cost of generating electricity in WA, with coal accounting for about 70% of Verve Energy's fuel needs.

GAS

Verve Energy has a 15-year gas transportation agreement with the owners of the Dampier-Bunbury Natural Gas Pipeline (DBNGP) for our gas-fired power stations.

COAL

Verve Energy has long-term coal supply contracts with Wesfarmers Premier Coal and Griffin Coal until 2010. After 2010 Wesfarmers Premier Coal will be the sole supplier of coal for 20 years.

Under these new arrangements there will be a reduction in our coal costs.



SUSTAINABLE ENERGY

Verve Energy recognises the concern about possible global climate changes from increased emission of greenhouses gases and is continuing to develop "green" energy technologies such as wind turbines, biomass plants and solar power.

Albany wind farm

The Albany wind farm, 12 kilometres from the city centre, consists of 12 wind turbines. It has the capacity to produce 75% of Albany's electricity needs. This wind farm has the biggest wind turbines in WA. It was opened in 2001.

Bremer Bay wind-diesel system

Bremer Bay has a wind-diesel system comprised of one wind turbine and a low-load diesel power station.

Denham wind-diesel system

Denham, an isolated town on Shark Bay peninsula, has one of the most advanced wind turbine projects of its type in the world with three wind turbines supplying up to 40% of the town's power.

Esperance wind farms

Esperance on the south coast, with a population of approximately 12,500, has two wind farms which were built in 1993 and 2004.



Exmouth mini wind farm

Exmouth, an isolated coastal town on the North West Cape, has three small WA - designed and manufactured wind turbines installed in 2002.

Kalbarri Photovoltaic System

A photovoltaic power system, which converts sunlight into electricity, has been operating in Kalbarri since 1995.

Rockingham Photovoltaic Trough Concentrating System

The Rockingham Photovoltaic Trough Concentrator System is a "solar powered" system which was connected to the electricity grid in 2000.

PROJECTS IN PROGRESS

A number of exciting projects are in progress and include:

- Biomass co-firing at Muja Power Station.
- Grasmere Wind Farm (extension to Albany wind farm)
- Coral Bay wind-diesel system
- Upgrade to the Hopetoun wind-diesel system
- Kalbarri wind farm
- Addition of a fourth wind turbine at Denham.
- Integrated Wood Processing (IWP) biomass plant at Narrogin



Verve Energy can be contacted by:

Mail

GPO Box F366
Perth, Western Australia 6841

In person

Head Office: 15-17 William Street
Perth, Western Australia 6000

Telephone

(08) 9424 1888

Fax

(08) 9424 1899

Email

inquiries@verveenergy.com.au

Power plant locations

